THE CHEMIST

DECEMBER 1949 VOLUME XXVI No. 12

MARC DARRIN

Chairman, Baltimore Chapter

(see page 463)

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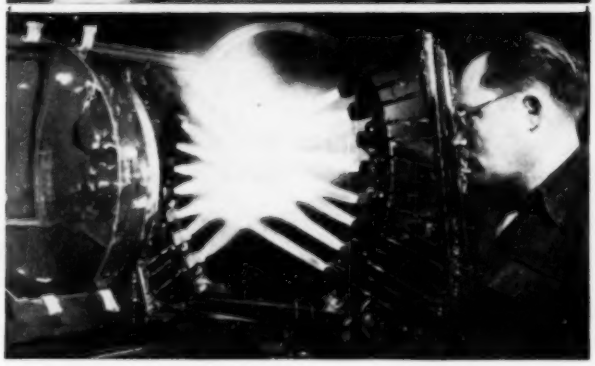

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Marc Darrin is chairman of the Baltimore Chapter, AIC, and chief research chemist, Mutual Chemical Company of America, Baltimore, Md. He received the B.S. and M.S. degrees from the University of Washington. As an industrial fellow at Mellon Institute, he published numerous papers and acquired a number of patents. He specializes in the technology of chromium chemicals, on which he has done extensive research. He is a member of the A.S.T.M. committees on corrosion, anodizing, electroplating, metal finishes, and pigments; the corrosion section of the Electrochemical Society, the National Association of Corrosion Engineers, the Maryland Academy of Science, The Chemists' Club, university clubs, and the Maryland Ornithological Society.

Concerning the Baltimore Chapter, Mr. Darrin says, "We are planning something different—meetings where discussions of selected topics will be led by a moderator chosen from the local group. These will be friendly, informal discussions where the younger men will feel free to ask questions and express new ideas. . . The topics will be thought-provoking questions and ideas. Some examples: Are salaries out-of-line? Will your job end in a blind alley? What about patents, published articles, special training on the job, post-graduate courses, the chemical library, leave of absences? What are the special problems of different fields? What are your thoughts about laboratory notebooks and reports? Where do various kinds of work lead? Freedom to succeed and freedom to fail? . . . Incidentally, we may include a critical evaluation of the purpose of our national organization and the philosophy behind its objectives . . . The basic idea is to cement personal contacts and stimulate the development of ideas. The most important thing is the contacts . . . Like the American Way of Life, what each man gains will be in proportion to his effort."

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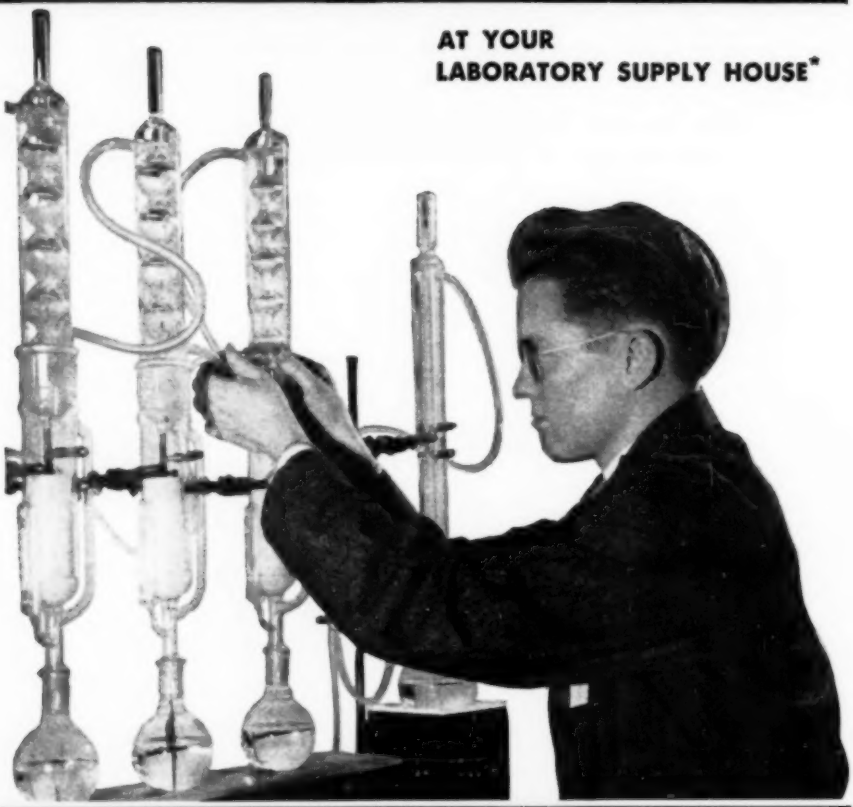

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EDITORIAL

Responsibility and Control

Dr. Wallace P. Cohoe, F.A.I.C.

Consultant, 120 East 41st Street, New York 17, N. Y.

PERSONNEL directors, when asked to find a chemist to fill a definite position, usually write a "Job Specification." The young chemist coming up for an interview usually presents, first and foremost, his training in chemistry or chemical engineering. A personnel director expects and is interested in this but it is not the fundamental part of his specification. He looks first for character and ability to get along with people, regarding professional training essential but as secondary. The sort of man hardest to find is one who will eventually be capable of filling an executive position in research, production, sales or management. One of the oldest, most successful and most highly respected executives in the field of science, in speaking of men with whom he has had experience, usually says, "Yes, so and so is a good man. He gets things done."

Chief of the character requirements are, dependability, industry, and the ability to accept responsibility. Assuming the possession of the first two characteristics, the possession of the third is likely to determine a man's success or failure in his future career. Accordingly, inquiries are made to determine whether an applicant can work by himself or whether he is only good enough to work under instruction. The answer to this, one way or the other, usually classifies men as to success or failure. The man who can only work under instruction, who must be spoon-fed, who cannot accept any responsibility for action or thought, is likely to find himself relapsing into the great white collar class, or putting his head into the unequal yoke of trade unionism.

"Getting things done" implies an acceptance of responsibility for action. For the beginner this will mean that he must do much work with his hands in conducting almost any operation. He will find, in industry, that the conduct of even laboratory bench operations is much different from the textbook descriptions he was familiar with in college. He will also find a wider instrumentation, some of which he will have to learn for the first time. If he is a beginner in chemical engineering he will assist in installation problems. Graduating from a good school equipped for pilot plant operations, installation will not be utterly strange to him. If he comes from a college which has taught chemical engineering by lectures and textbooks only, he will have consider-

able difficulty orienting himself to novel conditions. All this, of course, is good for him and if he does his work well, maintains pleasant relations between his assistants and workmen, he will soon establish an impression of willingness to take responsibility, and this willingness will put him on the bottom rungs of a long ladder.

"Getting -things -done" -does -not consist in action alone. All action is dictated by thoughtful planning. This means that to be successful there must be a willingness to accept the responsibility for earnest thought. When a young man begins to think constructively he also realizes that although he may be possessed of an expensive scientific training his graduation marks only the beginning of his real education. A sense of responsibility should begin long before the beginner is called upon for an expression of ideas. If he has given earnest thought to the problems upon which he is working he will be found by his superiors to be not only competent with respect to these problems, but ready with suggestions as to the projection of the same beyond their then existing limits. This is something which employing executives, working in any field of science, are looking for. When they find that a man has been thinking for the future they then know that they have found a treasure.

I cannot emphasize too strongly the necessity for, and the duty to exercise earnest thinking. The capacity to do this, when combined with a foundation of broad knowledge, is that which does the real work of the world. It is not every man who can do constructive thinking. Many fail to do so because they do not try seriously. The few who are constructive and practical thinkers carry their capital above their ears in contradistinction to the great majority whose capital is below their shoulders.

Acceptance of responsibility requires courage insomuch as every opportunity is accompanied by some degree of risk. When decisions have to be made, a clear distinction between the possible and the practical is often difficult. In this the scientific worker must have the courage of following out his scientific conclusions. This determines what is possible. In order to decide what is practical, common sense accumulated in the field of action will yield the answer. Since no one can know it all every man, at times, needs the help of others. No one need be ashamed to ask for such help. He can always be assured that if he is worthy of it he will get it.

Pittsburgh Conference

The Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy will be held at the William Penn Hotel, Pittsburgh, Pa., on February 15th, 16th and 17th. An Exposition of Modern Analytical Equipment will be featured, in addition to a comprehensive program of papers.

How Good an Employer Is Your Company?

Howard Nechamkin, M.A.I.C.

Assistant Professor of Chemistry, Pratt Institute, New York.

(An address given before a recent meeting of the New York Chapter, A.I.C.)

IT IS NOT usual to find that upon application for a position with some company you are handed a questionnaire to be filled out, on the basis of which your desirability as an employee is determined. All types of information, including your background and experience, are asked for, and your prospective employer has then, at his disposal, a fairly accurate index of the type of man he can expect you to be and the caliber of work of which you are capable. Periodic "job reviews" also are a regular function of any large organization. Employers find it mutually beneficial to see that the people working for them are meeting a certain set of standards and are progressing favorably. From the point of view of the employer, these questionnaires and the critical evaluation of your performance are quite understandable. He wants "the right man in the right job."

Have you ever considered how you, the employee, could make a similar and quite valid evaluation of your employer, or prospective employer, thereby assuring yourself that he has "the right job for the right man?"

It is hardly feasible that the employer would see it your way, if you approached him with a form to be filled out, on the basis of which you would, or would not, accept an offered position. The psychology of the employer is usually such that he feels that the law of supply and demand is always operating in his favor. Yet, why cannot the job you now hold, or are considering, be evaluated by you alone? Are there some salient factors of which you are aware, which pertain to your employer, and which you can weigh impartially? If so, you can come to a decision regarding your company as a desirable employer.

Personnel Placement

Does there exist a personnel placement testing program in the company? The problem of achieving desirable relationships among employees and between employees and management is well on its way toward solution if, right at the beginning of such relationships, a candidate for employment is examined for his aptitudes and adaptability to the job for which he is being considered. The intelligent use of the results of tests of this type

are considered of such benefit to both employees and management that the expenses involved in maintaining such a program in the company are paid for many times over in terms of harmony and efficiency in the organization.

Routine Work

Does the company sacrifice personal expansion and the gratification of individual talents and abilities for the performance of routinely laborious tasks which pass under the headings of "control, research, and efficiency?" Can a man be expected to demonstrate his special talents in certain directions, if his daily activities are constantly being channeled into one single direction? The words "routine work" and "boredom" have just about become synonymous in their usage, particularly when they apply to the work of the chemist. It should be borne in mind that routine work of some type is generally an absolutely necessary function of control and research. It is undesirable, however, if it is kept incessantly in the hands of a single individual, for routine work then becomes a lethal weapon which can well destroy his ambition and his initiative. Are these tasks reasonably well divided among individuals in your company? Do the chemists have an opportunity to exchange the type of routine work that they are doing among one another so that some element of variety enters their occupation?

Importance

There is nothing so important to a man as to feel that he is important. When he gets an idea either for a new process or for the improvement of some process or technique, he likes to feel that he is approaching a sympathetic listener when he proposes his suggestion for comment or approval. His individual ideas regarding research should never be completely ignored; rather an exploration of such new ideas by the company is desirable and the employee should be encouraged to continue with his interest, regardless of the actual merit of any of the suggestions he has made. Does your employer make you feel, in his attitude toward you, that you may have something to contribute to the growth of the organization and thereby grow with it? Or is the official attitude such that you feel that anybody could be doing the work that you are engaged in without it making any real difference to the company? Does there exist a lack of such personal contact between you and your work? A man who spends eight hours or more each day at such a job is very likely to become a highly frustrated individual. He will feel that for him the chemical profession has developed into something equivalent to manual labor. Any company which refuses to recognize the entity of individuals in their employ is doomed to playing temporary host to a dissatisfied crew of chemists. Their employees will be

casting anxious glances in all directions for some other position, where the natural craving for the recognition of an undeniable ego will be satisfied. An employee, if made to feel that he "belongs" would tend to make his work a desirable part of his life, thereby becoming immune to elements within or outside of the company that would tend to destroy its harmonious functioning.

Supervision

What about supervision in the company? Is there a centralized system of responsibility with competent men at the head of each department responsible, in turn, to some higher company officials? An organization of this type is usually far more efficient and easier to work for than is an arrangement composed of independent and isolated laboratories in constant warfare and competition with one another. You will get more satisfaction from your job and be happier in your dealings with your employer, if you know that there is someone to whom you can go with your problems and whose decision will not be countermanded tomorrow. Such an organization is conducive to a relaxed attitude among the employees which usually results in a greater feeling of security and contentment.

This centralization, however, should not be carried to the point where the high policy-making officials of the company become unapproachable. The voice of every man in the organization should be capable of being heard and his opinions should be weighed as well as expressed. Whenever a centralized system of this type gives rise to an omnipotent personality, the immediate effect will almost always be a chorus of grumbling complaints in the lower levels of the organization, which provides a fertile medium for the growth of anti-management forces in the company.

Laboratory Facilities

The laboratory facilities which are available in a company are a good reflection of the official attitude of the employer toward the men working for him. Chemists who are asked to work in dimly-lit, unpainted, shabby laboratories which just exactly comply with the fire laws, and no more, could hardly expect that their employer is much interested in their contentment while at work. Without mentioning specific names, I should like to bring to your attention the laboratories and plant of a certain large chemical manufacturing company in the mid-west.

It is impossible not to be impressed by the beneficial effects of a few well-placed coats of brightly colored paint. In my own tour through these buildings, I found myself infested by the contagious cheerfulness of the employees whom I met. Perhaps this pleasant attitude was due in large measure to the attractive shades of yellow, green, and pink that appeared where normally drab olive green or

dark brown were expected. There is no question that the study of the effect of color upon personal attitude has produced remarkable results. But is it not more remarkable that so many companies who employ countless thousands of persons pay so little attention to these results?

A chemist naturally feels that a warmer relationship exists between him and his employer, if he observes that his company is obviously interested in his comfort and esthetic sensitivities. A man who cannot wait to get home and away from the dingy laboratory where he works can hardly be a satisfied employee. When the percentage of dissatisfied employees grows, look to the employer for the faults.

There are other pertinent, if not more important, subjects which must be investigated at the same time, but which unfortunately, cannot be elaborated upon here. Such questions as recreational facilities, retirement provisions, paid vacations, seniority, sick leave, company health and life insurance, are all of considerable importance. It would be a great mistake to select a company as your place of employment which satisfies several of these requirements and ignores the others. It is far better to associate yourself with one which shows a tendency to do at least a little bit in every one of these areas. Such a company is progressive and employee-conscious and can justifiably expect superior results from its employees; it has supplied the necessary conditions for the development of goodwill and happiness among those who work for them. It remains only for the employee to react to these favorable conditions and to appreciate the opportunities presented to him.

If you feel that the company you work for, or have the opportunity to work for, supplies or will supply you with the essentials of security, personality and ability development, and is interested in you as a human being rather than an automaton, then that company is a good one and you would be happy to be working there. In fact, strange as it may seem, you will find that salary, which is mentioned here for the first time, loses its first magnitude importance as the sole factor in the choice or selection of a job.

Bhagwat to H. K. Ferguson

M. R. Bhagwat, F.A.I.C., is now associated as chemical engineer with H. K. Ferguson Company, industrial engineers and builders, at its Eastern headquarters located at 19 Rector Street, New York, N.Y. Mr. Bhagwat was formerly with Mathieson Chemical Corporation at Niagara Falls, N.Y. He has served as secretary and as chairman of the Niagara Chapter, AIC, and on many AIC committees. He is well-remembered as secretary and general manager of The Chemist Advisory Council and the Chemist Unemployment Committee, sponsored by the AIC.

Was the U.S. Patent System Planned for Supermen?

(A Comparison with Copyright Protection.)

A. John Michel, F.A.I.C.
Patent Attorney, New York, N.Y.

THE Constitution of the United States empowers Congress to "promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries," (Art. 1, Section 8). It is believed that the framers of the Constitution did not intend to discriminate between the treatment accorded the authors and that accorded inventors. Nevertheless, the record of the last twenty years or so shows that the federal courts are zealous to protect the exclusive rights of authors against infringement under the copyright laws, irrespective of whether such works contribute to the advancement of the arts and sciences (the record shows that over eighty per cent of the copyrights adjudicated have been upheld by the courts), and that on the other hand, the same courts, including particularly the Supreme Court, have invalidated over eighty per cent of the patents brought before them; this is by far the highest patent death penalty meted out by the courts of any country of the world.

At the very outset a basic discrimination exists in that patents are granted for but seventeen years and practically never extended, whereas copyrights are extendable for a maximum term of fifty-six years, and thus the public often pays tribute for a copyright to an individual already dead for a generation.

The present tendency of society is for government and organized groups to strive for more security and higher standards of living for the average worker, skilled or unskilled. With this nobody will find fault, particularly if benefits sought are earned by increased production of goods and services. For example, let the worker be a wage earner or a farmer, there seems to be no limit to the encouragement he receives from his organizations and government groups in his demands for wage increases, pensions, etc. or price supports for his farm products. Or let the worker be a composer for a more or less trivial copyrighted song, we find that society as represented by the courts is zealous to confirm his exclusive rights by interpreting the statutory pro-

visions in his favor. None of the authors of the thousands of the less-than-mediocre songs, verses, cartoons, etc., which are copyrighted each year, is ever called upon to prove the artistic or literary quality, or novelty, of such works where copyrights are alleged to have been infringed, and the courts in over eight cases out of ten resolve all questions in favor of the copyright owner. To stake out his claim, all the author has to do is to register his work in the Copyright Office (fee $4.00, and the Government will even pay his mailing expenses).

But let the worker be an artisan, researcher, manufacturer, chemist, or other inventor or discoverer seeking patent rights for his creation or discovery, and we find that he is first forced to run an expensive gauntlet in the Patent Office, and then that society as represented by the courts, in 86 per cent of the cases coming before them, will decide that the inventor has no exclusive right and that all his labor went for nought. This is so despite the fact that in many cases the research, experimentation, and other work preceding the grant of the patent by the Patent Office (after a thorough prior art search) involved a continuous mental effort usually of a high degree and of the order of months or years, the outlay of considerable amounts of money, and in a great many cases possesses real merit, as otherwise competitors of the inventor would not try to copy the improvement or invalidate it.

The Patent Situation

The reason for this peculiar state of affairs seems to be that during the past two or three decades the primary object of the U.S. Supreme Court in patent cases has been to protect the "public" at the expense of the inventor. It is a fact known today by all those who have followed the evolution of patent rights including, apparently, a small minority of the judiciary itself, that either the patent laws need overhauling, or that the majority of the judiciary, including particularly of the Supreme Court, refuse to recognize the position and importance of the patent system in its relation to industrial, technical, and social progress, and to follow established principles of patent law applicable to questions of infringement and validity. At the present time, the majority of the bench apparently are convinced that patents are bad for the common welfare, and hence in the popular campaign against monopoly, patents must be looked upon as obnoxious private monopolies and dealt with severely, quite often ignoring the fact that in the vast majority of improvements an inventor's creation is no monopoly in the commonly accepted sense, since he does not deprive the public of anything the public had before his invention, but on the contrary he has to disclose or contribute something

to the sum total of social wealth before the Patent Office will grant him a patent. It is true that there are many cases where patentees have endeavored to broaden their exclusive rights beyond the scope of their patents, or have otherwise abused their rights. Nobody will disagree with court decisions which put an end to such practices. However, in the majority of cases, patents are invalidated because of alleged lack of that intangible element "invention." This tendency by the Supreme Court to invalidate patents caused Mr. Justice Jackson, in his dissenting opinion in the recent case of Jungerson v. Ostby & Barton Co., decided on January 3, 1949, (see below) to remark "the only patent that is valid is one which this court has not been able to get its hands on."

Let us look at the recent patent record very briefly.

In Cuno Corp. v. Automatic Devices (314 US 84, 90, 91; 51 USPQ 272-) the Supreme Court said: "We may concede that the functions performed by Mead's combination were new and useful. But that does not necessarily make the device patentable. Under the statute (35 USC Sec. 31; R.S. Sec. 4886) the device must not only be "new and useful" it must also be an "invention" or "discovery". . . . It has been recognized that if an improvement is to obtain the privileged position of a patent, more ingenuity must be involved than the work of a mechanic skilled in the art . . . Perfection of workmanship, however much it may increase the convenience, extend the use, or diminish expense, is not patentable . . . That is to say, the new device, however useful it may be, must reveal the flash of creative genius, not merely the skill of the calling. If it fails, it has not established its right to a private grant on the public domain."

This decision was, and still is to some extent, the subject of a considerable amount of apprehension on the part of inventors, patentees and the Patent Bar, as it was feared that the Supreme Court had laid down a new standard of invention in accordance with which only those innovations which involved "flash of genius" would be patentable. How serious a setback to patent protection this would be can be realized, if we stop to think that the forward march of industrial accomplishment is largely due to the efforts of hundreds of thousands of workers most of whom are not geniuses, unless we accept Thomas A. Edison's definition of genius, i.e. that it is 95 per cent perspiration and 5 per cent inspiration. The minds and hands of these workers are more active than those of the rank and file; they are not supermen, but they spend their time and means to perfect those technical improvements which we have occasion to marvel at every day because these

make our lives easier and more enjoyable, and if we use them correctly, longer; they do this in the hope of "promoting the progress of science and useful arts," and of thus benefiting society including themselves. Since the time of the above decision, other decisions were rendered by the Supreme Court which appears to make it clear that while the Court was probably not attempting to set up a raised standard for patentability, it still demands a very high level of invention before it will find validity in a patent. In Sinclair Co. v. Interchemical Corp. 325 U.S. 327, 330, 331, the Supreme Court said:

> "A long line of cases has held it to be an essential requirement for the validity of a patent that the subject matter display "invention," "more ingenuity . . . than the work of a mechanic skilled in the art" . . . This test is often difficult to apply; but its purpose is clear. Under this test, some substantial innovation is necessary, an innovation for which society is truly indebted to the efforts of the patentee. Whether or not those efforts are of a special kind does not concern us. The primary purpose of our patent system is not reward of the individual but the advancement of the arts and sciences. Its inducement is directed to disclosure of advances in knowledge which will be beneficial to society; it is not a certificate of merit, but an incentive to disclosure . . . Consequently, it is not concerned with the quality of the inventor's mind but with the quality of his product."

Decision Not Unanimous

The second case, referred to briefly above (Jungerson v. Ostby & Barton Co.), is further enlightening in that it shows that at least three members of the court expressed their disapproval of the majority decision invalidating the patent and deciding in favor of the infringer upon the rights supposedly protected by patent 2,118,468. Two dissenting opinions were written, one by Mr. Justice Frankfurter which was concurred in by Mr. Justice Burton. Said Mr. Frankfurter:

> "This is not one of those patent controversies that carry serious consequences for an important industry and thereby for the general public. The case does, however, raise basic issues regarding the judiciary's role in our existing patent system. These issues were stated by Judge Learned Hand when the litigation was before the Court of Appeals for the Second Circuit. Since this Court's opinion has not, to my mind, met the questions which he raised, and since I cannot improve upon what Judge Learned Hand wrote, I adopt his opinion as mine.
>
> "'In spite of all these approaches, and of the fact that all the elements of the disclosure were to be found in the prior art, it remains true that Jungerson's process in its entirety had never been assembled before; no one had ever thought of combining all those steps in a single sequence. What better test of invention can one ask than the detection of that which others had all along had a strong incentive to discover, but had failed to see, though all the while it lay beneath their eyes? True, the whole approach to the subject has suffered a shift within the last decade or so, which I recognize that we should accept as authoritative. Moreover, I am not aware of the slightest bias in favor of the present system; I should accept with equanimity a new system or no system. However, I confess myself baffled to know how to proceed, if we are at once to profess to apply the system as it is, and yet in every concrete instance we are to decide as though it did not exist as it is. In the case at bar, I can

> only say that, so far as I have been able to comprehend those factors which have been held to determine invention, and to which at least lip service continues to be paid, the combination in suit has every hall-mark of a valid patent. 166 F.2d 811; 76 USPQ 491.'"

The other dissenting opinion of the Supreme Court was written by Mr. Justice Jackson who stated:

> ". . . It would not be difficult to cite many instances of patents that have been granted, improperly I think, and without adequate tests of invention by the Patent Office. But I doubt that the remedy for such Patent Office passion for granting patents is an equally strong passion in this Court for striking them down so that the only patent that is valid is one which this Court has not been able to get its hands on. I agree with the opinion of Judge Learned Hand below."

When the courts are unable to destroy a patent as lacking in disclosure of "an invention" they reach the same result even more devastatingly by holding that the patentee drew the wrong kind of a claim. Halliburton v. Walker 329 US; 71 US PQ 175.

The benign construction of a worthy patent to possibly uphold it for a limited scope if a broad scope seems improper was a well established principle of patent jurisprudence, for example, Rubber Co. v. Goodyear 9 Wallace 788 (1869); Motion Picture Patents Co. v. Universal Film Mfg. Co. 243 US 502; 61 L. Ed. 871; 876, has been suspended by what appears to be a rule of malevolence against all patents whereby they are to be destroyed.

Public Opinion Aroused

At least partly as a result of awakening public opinion, which for a long time had manifested a certain degree of inertia toward this very real threat of the gradual destruction of our patent system and of the value of patents by the courts, more and more people are becoming convinced that, if the purpose of our patent system is to be the advancement of the arts and sciences and if it is to be saved from this complete attrition by the judiciary, the public must act through its elected representatives and lawmakers so that the enactment of suitable legislation will induce the judiciary to take a more liberal view towards patents and protect the rights of patentees. One of the bills now pending before Congress (Bryson Bill H.R. 4798) is entitled "A Bill to declare the national policy regarding the test for determining invention." This bill in substance proposes that patentability be determined objectively by the nature of the contribution to the art and not subjectively by the nature of the process by which an invention may have been accomplished. This legislation was prompted by the so-called "flash-of-genius" phrase which occurrs in the above quoted decision in Cuno Corp. v. Automatic Devices, and might be of assistance insofar as it might help to strengthen the presumption of invention in a patent, but it is not seen how it would make the courts more

appreciative of the rights of inventors as compared with those of other workers. Also, in the words of former Commissioner of Patents Casper Ooms, it is

> "doubtful that you can guide the judicial process by any such rule of limitation upon the scope of its inquiry. I am somewhat hopeful that if we are able in the Patent Office to formulate rules which may serve as a guide for the determination of invention that we shall find some courts sufficiently receptive to the rules we frame as to find in them some guide to that everpresent difficult problem of indentifying that fugitive quality called invention." (28 JPOS 5)

Another bill now pending before Congress is the one introduced by Senator Wiley on August 31, 1949, (S.2518), concerning which the Senator stated that he recognized that this comprehensive bill, which originated with the Milwaukee Patent Law Association, is highly controversial and "is by no means submitted as a final draft." He said that among its aims the bill proposes:

A clear statement of the patent grant which is not deceptive in any way. A strengthening of the presumption of validity of a patent. A clarification of the rights of a patentee with respect to licenses under the patent. Clarification of rights of a patentee who sells or leases goods under the patent to restrict the use or sale thereof by the purchaser. Clarification of the rights of a patentee when one or more of his claims are held to be invalid. Establishing of a definition of what constitutes infringement.

In the August issue of the *Journal of the Patent office Society* (31 JP OS 611), Dr. S. C. Gilfillan makes an interesting contribution to the discussion of the problem, proposing to set up an economic test for patents, i.e. to base patent rights on the determination of whether a patent is warranted because the invention it covers constitutes useful creative work which might not have been done without the prospective reward of a patent. Dr. Gilfillan's test may be too ambiguous to promise clarification and liberalization of the attitude of the present courts towards patents but many of his ideas appear to be quite sound.

The Double Standard

It is submitted here that the double standard of judgment adopted by the judiciary in patent cases on the one hand and copyright cases on the other is not warranted by fact or law. In copyright cases, the courts merely decide whether the alleged infringer has copied from the copyrighted work outside the limits of fair use, and, if a finding to that effect is made, the copyright infringer is adjudged guilty under the law. The court does not presume to judge the merits of the copyrighted work, presumably and implicitly following the theory that, if the work is good enough for somebody to copy, the author thereof is entitled to reap its profits.

How different is the situation in patent infringement cases! Among fifteen or more other defenses available to the infringer of a patent is the allegation of invalidity of the patent, and a patent all too frequently is adjudged invalid for "lack of invention". The court may hold that the patent has indeed been infringed by the defendant but that it is invalid because the inventor has not lived up to the standard of invention expected from him by the courts. Why should not the courts hold, as they do in copyright cases, that the inventor is entitled to the fruits of his work and, if someone thinks highly enough of his invention to use it without his permission he establishes *prima facie* evidence of its value and the patentee's right thereto, as guaranteed by the Constitution.

If the patented invention is not meritorious, nobody will attempt to exploit it and the question of infringement will never come up. If the patent was granted by the Patent Office through the error of an insufficient search and its claims are clearly anticipated by prior art, the defendant need only produce such prior publication and thereby establish a perfect defense: he can then rightly claim that he did not copy (infringe) the patented invention at all but was following the prior teachings which, of course, were open to him. In other words, some such approach of the bench to patent cases will not result in giving patentees undue protection and thus unduly restrict commerce and industry. It will only protect the exact territory of novelty the inventor has contributed to the art. If there is no novelty, he will have no protection. If he has created something novel, facts or law do not warrant an inquiry into the quality of his creation but, quite in contrary, law and equity demand that he enjoy the protection for the new territory he has added to the sum total of the arts and sciences.

The test for the validity of a patent, then, should be, in short: does the alleged infringer in fact use the method, apparatus or product claimed in the patent? If yes, is the patented invention covered by some prior publication from which the defendant may have taken it? The burden of proof for this allegation is clearly upon the defendant. If he can produce prior publications, he can, of course, no longer be held to have infringed the patent. If he cannot, he is, and should be so held, guilty of infringement.

Solutions to this problem may not be readily available and our proposals probably suffer from over-simplification, but some way must surely be found to (1) bring the administrative (Patent Office) and court decisions in patent matters in line so that the vast majority of rights granted by one government agency are no longer destroyed by another, and (2) to give

inventors the protection guaranteed them in the Constitution, as presently granted to other groups of creative workers under the very same constitutional provision.

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Frank J. Steele, chief pharmacist, Greenwich Hospital, Greenwich, Conn., has been appointed a member of the faculty (night school), of Stamford University, Stamford, Conn.

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AAAS Meeting

Among features at the annual meeting of the American Association for the Advancement of Science, to be held December 26th to 31st at the Hotel Statler, New York, N.Y. are: The Science Exposition; the AAAS Science Theatre which will show the latest scientific films; the Annual International Photography - in - Science Salon; the award of special prizes; and the presentation of approximately 2,000 papers in many fields of science.

Perkin Medal Award

The American Section of The Society of Chemical Industry announces that the Perkin Medal for 1950 will be presented to Eger V. Murphree, president of the Standard Oil Development Company, at a dinner January sixth, at the Waldorf-Astoria, New York, N.Y. The presentation of the medal will be made by Col. Marston T. Bogert, Hon. AIC, senior past president of The Society of Chemical Industry. Dr. Gustavus J. Esselen, F.A.I.C., chairman of The American Section of the Society will act as chairman.

Spectroscopy Meeting

The Society for Applied Spectroscopy will meet January tenth at Socony-Vacuum Training Center, 63 Park Row, New York, N.Y. at eight o'clock to hear Dr. Daniel Norman, New England Spectrochemical Laboratories, speak on "Spectrographic Analysis of Molecular Fragments." Robert Taylor of Atlantic Refining Company is technical chairman.

Communications

Unfair Advertising

To the Secretary:

It has been my great pleasure through the last several years to be associated with the INSTITUTE in such manner as to lend moral support, if nothing more, and to preach the benefits of membership in the INSTITUTE to young chemists.

One of the outstanding privileges enjoyed by members of THE AMERICAN INSTITUTE OF CHEMISTS is the ability of any member to solicit aid and advice from the INSTITUTE, supported by the large number of well-known chemists that make up its roster, on problems which are of vital importance to the profession and the economic standing of its members.

It is probably well-known that the Paint and Varnish industry is the fourth largest employer of chemists in the country, having about three or four per cent of all employed chemists in that industry. It is, therefore, quite natural for a member of the INSTITUTE who has made the paint industry his career, to resent anything that tends to cut inroads into the future of chemists in that field of endeavor.

Recently one of the larger suppliers of raw materials to manufacturers of surface coatings has published a brochure, addressed, in title and in actuality, to management groups in this field, citing the advantages in product and economy which could be attained by obtaining copies of their published formulations for paint, using their specific raw materials.

It is common knowledge, that we, in a complex business like ours, solicit and welcome formulative aid from the laboratories of our suppliers. This accomplishes two objectives, it aids the smaller companies to compete by keeping abreast of what is new in raw materials and how to use them; and it provides jobs for chemists at the customer service level in suppliers plants. We have never before, however, seen anything in print which advised management to save money at the expense of its chemical help by stating in advertising such comments as:

> "Six months and sixty-five hundred dollars."
> "Alas, and you could have done it all in five minutes, with a three cent stamp."
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This is a deliberate attempt aimed at management to influence it to dispense with, or reduce, the number of people employed as chemist formulators in their laboratories, and if taken at face value, would indicate the abolishment of laboratory personnel

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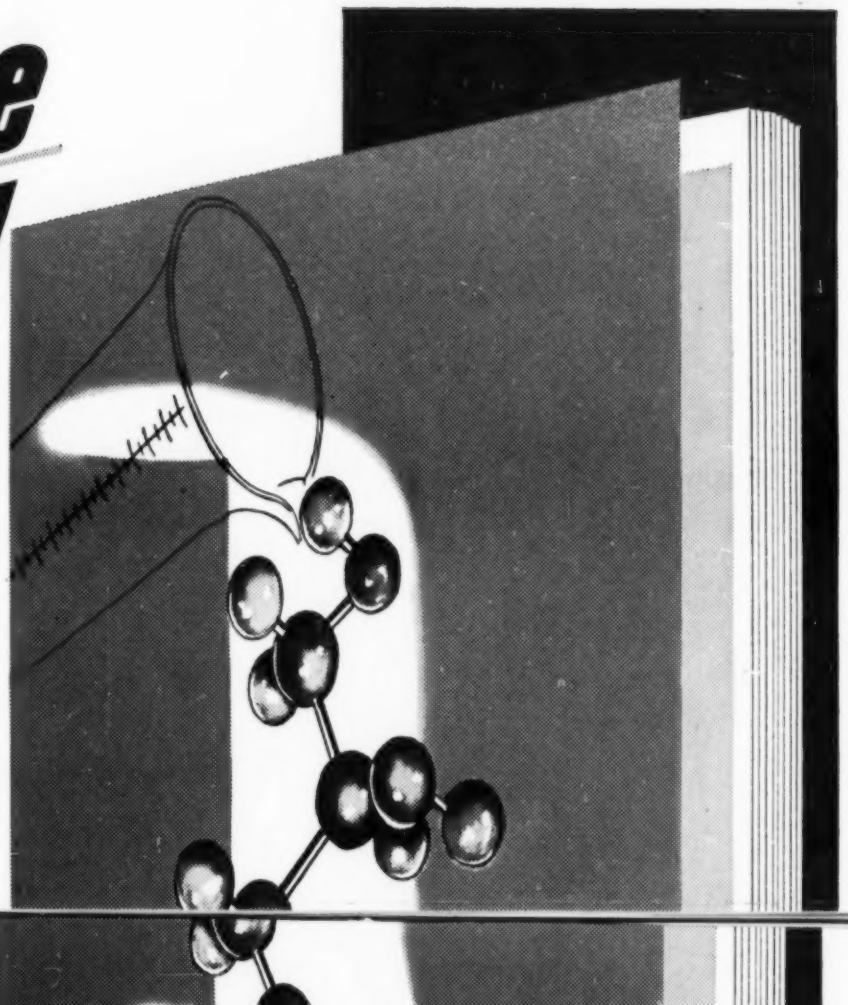

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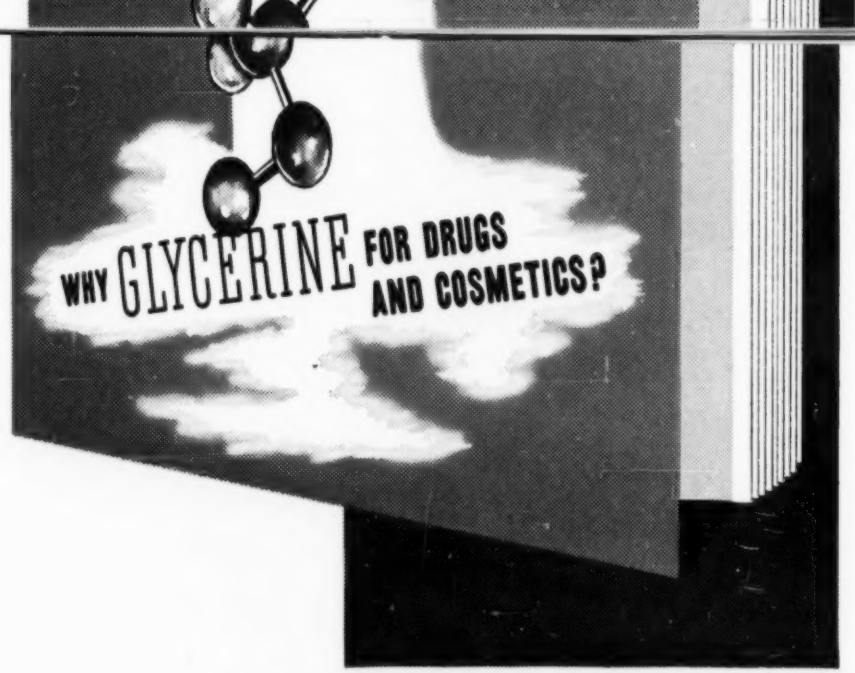

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and space completely. Those people, like myself, who have spent a lifetime in this field, can only resent this type of advertising, and actually, I doubt if it will be received by the management of many organizations as being in good taste. The implication is that anybody with a garage can now make paint without technical skill, and can compete with those who have spent millions of dollars in research on formulations.

It is highly problematical that such advertising will convince paint manufacturers that everybody should make the same kind of paint from the same formulations and the same base materials (the only difference between products would be the advertising claims), but I earnestly believe that chemists cannot sit idly by and not express their opinions strongly, through the INSTITUTE, while management is advised to increase its profit by discharging the people with formulative skill and inventive minds, and by operating solely on published formulations designed basically to sell some specific raw product.

—John W. Nee, F.A.I.C.

Motivation in Research

To the Editor:

An unfortunately large proportion of young technical graduates are finding disappointment and dissatisfaction in modern industrial research. This reflects no decline in the intrinsic appeals of research itself; on the contrary the appeal of science to young men and women today probably never has been equalled. It arises instead from the failure of industrial management to take proper cognizance of motivation in research, or to perceive that each element of research has become unique in the demands it makes upon the men who conduct it. Equally prevalent are the misconceptions that monetary reward is motivation enough, or that one form of motivation can apply to and sustain all branches of research, no matter how divergent.

Industry has been quick to distinguish betwen fundamental, development, and application research in terms of its own needs, but slow to realize that these fields call for personalities and talents as unlike as those of astronomer and carnival barker. Employers advertising for research personnel frequently ask for research and/or development workers as if an applicant who is interested in the one will be equally at home and as happy in the other. Moreover many companies naively expect research personnel to switch from one form of investigation to another and back again with no loss of zeal.

The basic fact that the technical graduate's native ability, his temperament and his scientific ambitions determine the branch of research to which he is suited and in which he will be content, is too seldom taken into account.

Consequently the beginning researcher is apt to be abruptly dis-

illusioned. If wrongly placed, he finds himself called upon to perform tasks in which he has no interest, and the aura of high significance in which the technical student is justifiably disposed to envelop science is soon dispelled. No factor in job placement has ever been more wrongfully minimized than enthusiasm. The loss of fresh enthusiasm for research can be fatal to an otherwise promising career, and in the long run, fatal as well to those industries whose progress depends so much on a continuing supply of enthusiastic young minds.

The researcher must furnish from within himself strong motivation above and beyond desire for monetary reward if he is to be truly successful, from his own and his employer's standpoint. This vital motivation is not the same for all branches of research. Broadly speaking, the fundamental researcher is motivated by love of knowledge; the development researcher by love of mankind and its needs, and the application researcher by love of company and its products. Only by a complete understanding of the distinguishing demands of fundamental, development, and application research, can industry hope to bring about a happy lasting alliance between the man and his work.

The new employee who comes for the first time before his supervisor's desk, brings more than an education with him. He brings a certain talent and temperament, a motivating scientific ambition already fixed, and beyond the power of his employer to alter. It is part of industry's responsibility and to industry's ultimate good, to help him fulfill his destiny.

—N. G. Britt

Profits Through Literature Research

To the Editor:

I wish to congratulate you on and thank you for a very fine editorial, "Chemical Literature Unlimited," in the October CHEMIST. You analyzed the situation wonderfully—the only trouble is that most firms think that literature reading and abstracting can be done in the chemist's spare time at home, or they hire a youngster with the B.S. in chemistry and with typing, etc. for this important job. Most firms do not understand that they could make big money and save perhaps years of research work, if experienced chemists were paid top salaries for such a job that must be well done to be of real value.

—Rudolph Seiden, F.A.I.C.

Is There a Moral

Cayuga's Waters: If you are a parent, and your lad is doing lousy in school, don't read this to him. It's about Gus Egloff and Adolphe Menjou. They were classmates at Cornell in 1910. Gus was there because he was nuts about engineering. Adolphe

was there because Papa Menjou put his foot down.

Gus won honors in engineering, plus the 125-pound intercollegiate wrestling title. Adolphe was the campus' star pool player, bowler and amateur actor.

Gus graduated in 1912. He now is Chicago's walking petroleum encyclopedia. Once, when he was expert witness in a patent suit, an unwary opposition barrister tried to discredit him. "What," demanded the barrister, "do YOU know about emulsions? That lawyer has been kicking himself ever since, because Dr. Gustav Egloff ad-libbed expertly on emulsions for the next 21 days.

Adolph didn't graduate. Long before 1912, the dean called him in and suggested Cornell was a terrible place to major in pool shooting.

So the other night Menjou was in town. Dr. Egloff rounded up his wife, and his secretary, and took 'em over to see his old classmate.

"Hi," said the famous star of stage, screen, and TV, "how's your wrestling?"

"Hi," said Dr. Egloff, "how's your pool?"

"Never," they chorused, "get time for it any more!"

Wonder if there's a moral there someplace.

—"The Town Crier",
Chicago Daily News

Inspired by Editorial

To the Editor:

The editorial entitled, "The Patent System and the Supreme Court," by Dr. F. A. Hessel, which you published in the February 1949 number of THE CHEMIST, prompted me to write the enclosed article, "Was the U. S. Patent System Planned for Supermen? A Comparison with Copyright Protection." (See page 471).

—A. John Michel, F.A.I.C.

Evans Awarded Medal

Dr. Ralph L. Evans, F.A.I.C., president of Evans Chemetics, Inc., Evans Research and Development Corporation, and Sales Affiliates, Inc., will receive the second Annual Medal of the American Society of Cosmetic Chemists at its meeting, to be held December eighth. Dr. Evans received the S.B. degree from the University of Chicago in 1919, following his service in World War I as Artillery lieutenant, and the Ph.D. degree from Columbia University in 1925. During World War II, Dr. Evans operated four plants for the production of protective ointments for gas warfare, insect repellents, and stable peroxides, in addition to research in chemical warfare. Since 1922, he has applied the research talents of chemists to the problems of the cosmetics industry.

Research Corporation Grants

Grants in aid of scientific research amounting to approximately $217,000 were announced by Dr. Joseph W. Barker, president of Research Corporation, 405 Lexington Ave, New York 17, N.Y. These grants were divided among seventy-one recipients in American colleges, universities and scientific institutions. The Research Corporation was founded in 1912 by the late Dr. Frederick Gardner Cottrell, AIC medalist in 1938, who assigned to it the patents on his process for cleansing industrial gases by electrical precipitation. Other income is derived from the management of patents voluntarily assigned to it by individuals and institutions. The Corporation has aided for some years the work of Dr. Edward C. Kendall, of the Mayo Clinic, in the discovery and synthesis of Cortisone (Compound E).

Election

The American Institute of Chemical Engineers announces the election of the following new officers: President, Warren L. McCabe, vice president and director of research, The Flintkote Co.; Vice president, T. H. Chilton, technical director, Development Engineering Division, E. I du-Pont de Nemours & Company; Re-elected secretary, S. L. Tyler; Re-elected treasurer, C. R. DeLong; Directors, C. G. Kirkbride, W. G. Whitmas, G. E. Holbrook, and R. L. Murray.

Chemists Available

Chemist, F.A.I.C., 29, recent graduate courses, several years industrial experience with nationally known concerns and with U.S. Government agencies; titanium and zirconium, anhydrous hydrofluoric acid; boron in steel; non-ferrous and ferrous alloy analyses; fuels and lubricants; batteries; publications, literature and patent search; sales; available for special work or representation of an industrial firm in Western Pennsylvania; will open an office if necessary.

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Necrology

Homer Adkins

Dr. Homer Adkins, professor of organic chemistry at the University of Wisconsin, died August 10, 1949, in Madison, Wisconsin, at the age of fifty-seven. He was born in Newport, Ohio. He obtained the B.Sc. and D.Sc. degrees from Denison University, and the M.A. and Ph.D. degrees from Ohio State University. After holding an instructorship for one year at Ohio State University, Dr. Adkins became an assistant professor at the University of Wisconsin in 1919; in 1924 he became associate professor, and in 1928, full professor. He was author or co-author of over 160 scientific papers; co-author of "Practice of Organic Chemistry," and "Elementary Organic Chemistry"; author of "Reactions of Hydrogen," and a member of the board of editors of "Organic Synthesis," "Organic Chemistry," and "Organic Reactions." He was awarded the "Medal for Merit" by President Truman for his conduct and administration of investigations under the Office of Scientific Research and Development from 1941 to 1945.

Dr. Adkins was a Fellow of the Chemical Society (London); a member of the Swiss Chemical Society, the American Association for the Advancement of Science, the American Association of University Professors, The Chemists' Club, and the National Academy of Sciences. He was active in the American Chemical Society, having served on its Council Policy Committee, as chairman of the Organic Division, and as chairman and councilor of the Wisconsin Section. He became a Fellow of THE AMERICAN INSTITUTE OF CHEMISTS in 1949.

Lotti J. Greiff

Dr. Lotti J. Greiff, teacher of chemistry at Far Rockaway High School, Long Island, New York, died at her home in Neponsit, Long Island, February 21, 1949, at the age of fifty-eight.

She was born in New York, N. Y. In 1911, she received the B.A. degree from Barnard College, Columbia University; the M.S. degree from Cornell University in 1927, and the Ph.D. degree from Columbia University in 1931. Her life was largely occupied with the teaching of chemistry, except for a notable period when she did research with Dr. H. C Urey and others on isotopic equilibria and theories of solutions, which led to the publication of joint papers, as well as to valuable contributions to the atomic research done during the late war.

Dr. Greiff was a member of the American Chemical Society, Sigma Xi, the Chemistry Teachers Club, the Physics Club of New York, and the General Science Association. She

was a Fellow of the American Association for the Advancement of Science. She became a Fellow of The American Institute of Chemists in 1936. Dr. Greiff is survived by two sisters and a brother.

William Ralston

William Ralston, chief of the Richmond Laboratories of the Tobacco By-Products and Chemical Corporation, Richmond, Virginia, died April 25, 1949, at the age of fifty-three.

He was born in Paisley, Scotland. He was educated at the Royal Technical College, Glasgow, from which he received the diploma in chemistry in 1914. After coming to the United States, he also studied at the Virginia Mechanics Institute of Richmond. He started as assistant chemist with the Virginia-Carolina Chemical Corporation, then joined the Virginia State Department of Agriculture which he left in September, 1917, to become a soldier in the Canadian Army. Upon his return, he was employed as chemist by F. S. Royster Guano Company, Norfolk, Virginia, until 1922, when he became chemist for the Virginia-Carolina Chemical Corporation. In 1925, he joined the Tobacco By-Products and Chemical Corporation.

Mr. Ralston was active in the Virginia Section of the American Chemical Society for many years; served as chairman for one term, and edited the Section publication for several years. He was a member of the Virginia Academy of Science. He became a Fellow of THE AMERICAN INSTITUTE OF CHEMISTS in 1945.

Townes R. Leigh

Dr. Townes Randolph Leigh, dean emeritus of the College of Arts and Sciences and head of the Chemistry Department of the University of Florida, died February 15th, in Gainesville, Florida.

With a rich background of training and proven success as a teacher and administrator, Dr. Leigh was appointed head of the Chemistry Department of the University of Florida in 1920. His fine personality, abilities, and leadership captivated the hearts of Florida pharmacists, his colleagues, and friends, and led to the establishment of the College of Pharmacy of the University of Florida in 1923 in which he served as dean until 1933. In 1934, he was appointed acting vice president of the University of Florida. In 1948 he was given the title of honorary vice president. Through his persistent efforts, the Chemistry - Pharmacy Building was ereced in 1927 and enlarged in 1940. Dr. Leigh was state chemist in 1931.

Dr. Leigh was a member of numerous organizations and served with distinction in many of them. He was chairman of the Committee on Cur-

riculum and Teaching Methods of the American Association of Colleges of Pharmacy from 1928 to 1931, and president in 1931-32; member of the American Council on Pharmaceutical Education 1932-1946; member Revision Committee U.S.P. XI. In the American Chemical Society, he was chairman of the Kentucky Section in 1919, Florida Section 1923-25, and past director of the Fourth District. For many years, he was associate editor of the *Southeastern Drug Journal*. He was made a Fellow of THE AMERICAN INSTITUTE OF CHEMISTS in 1935.

During World War I, he served as a dollar-a-year man and developed the Leigh Fog Screen for protection of naval vessels against submarines. During that period he was author of numerous articles on chemical warfare.

For his contributions to chemistry, John B. Stetson University honored Dr. Leigh with the degree of Sc.D. in 1941. For similar accomplishments, he received the Charles Herty medal in 1942. Dr. Leigh's last honor, election to the Royal Society of Arts (London), came a few weeks before his death. He is survived by his widow, Mrs. Blanche W. Leigh; one brother, R. E. Leigh, and a sister, Mrs. Octa C. Leigh.

Cortisone Conference

At the Cortisone Conference sponsored by Research Corporation, September seventh, Dr. Robert R. Williams, director of the Research Corporation's grants, summarized plans to speed research on Cortisone. Owners will pool patents and Research Corporation will be free to license other firms under any of the patents. A committee appointed by the National Academy of Sciences will allocate the meager supply of Cortisone to research institutions. Research Corporation is contributing about $85,000 this year in grants to scientists in academic institutions who may be able to find better synthetic approaches to Cortisone and related substances.

Soap and Glycerine Convention

The Twenty-third Annual Convention of the Association of American Soap and Glycerine Producers will be held January 25th and 26th in the Hotel Plaza, New York, N.Y. Division meetings will be conducted in successive order rather than in concurrent fashion. Subjects such as synthetic detergents, bulk soaps, market research, industrial relations, specialty soaps, and glycerine, will be discussed.

The thermometer business of the American Thermometer Company, St. Louis, Mo., has been purchased by the H-B Instrument Company, 2633 Trenton Ave., Philadelphia 25, Pa.

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James R. Withrow, *At-Large*
Lincoln T. Work, *At-Large*

November Meeting

The 261st meeting of the National Council, A.I.C., was held November 9, 1949, at 6:00 p.m. at The Chemists' Club, 52 East 41st Street, New York, N.Y. President Lawrence H. Flett presided.

The following councilors and officers were present: Messrs. D. L. Cottle, L. H. Flett, K. M. Herstein, F. A. Hessel, R. E. Kirk, C. P. Neidig, D. Price, C. W. Rivise, F. D. Snell, L. Van Doren, F. E. Wall, J. R. Withrow, L. T. Work. E. R. Allen, M. J. Kelley, E. I. Oppel, and V. F. Kimball were present.

The minutes of the preceding meeting were accepted.

President Flett distributed, for comment, a copy of a letter which

will be sent to the membership, requesting that each member bring in one new member.

The President was given authority to appoint a committee to study the use of the initials, F.A.I.C., after the names of members. It was thought that the practice should be uniform. The President was also given authority to appoint a committee to study the form of certificates of membership with the view of improving them.

The President offered a tentative program for the two-day Annual Meeting: First day: Registration and business meeting in the morning. Council Luncheon. Professional papers in the afternoon. Second day: Breakfast for officers and chapter officers. Professional Papers. General luncheon to meet Honorary members. General meeting. Medal Banquet in the evening.

The Secretary reported that the membership now totals 2420. The Secretary announced with regret the deaths of the following Fellows: Charles L. Gabriel, September 24, 1949; Harvey Kittredge, November 6, 1948.

A letter from Calm M. Hoke, F.A.I.C., was read, thanking the Council for recognition of her service to the Institute as a Charter Member, when her offices were used for council meetings, and when she first founded the "Bulletin" which later became The Chemist.

Dr. James R. Withrow reported as AIC delegate to the inauguration of William Bay Irvine as president of Marietta College, Marietta, Ohio, on October 16th.

The Jury of Medal Award reported that Dr. Walter J. Murphy, F.A.I.C., had been selected to receive the 1950 Gold Medal of the Institute, to be presented at the Medal Award Banquet at the Annual Meeting.

The Treasurer's reports were accepted.

Dr. Kelley, chairman of the Committee on Arrangements for the Annual Meeting, reported. Upon motion, the recommendation of the Committee that the Hotel New Yorker be selected for the Annual Meeting, and that the dates be May 11th and 12th, was adopted.

Mr. Oppel reported as chairman of the Membership Committee.

Dr. Work reported as chairman of the Committee on Honorary Members.

Mr. Herstein reported for the Committee to Approve Chapter Constitutions. Upon motion, the Constitution and By-laws of the New Jersey Chapter were approved.

Mr. Rivise reported for the Pennsylvania Chapter.

Mr. Herstein stated that at a meeting of the New York Chapter's Council, he was asked to make a motion that the proposed amendment to the By-laws of the Institute to create a new award for great educators,

(laid on the table at the July Council meeting), be taken from the table and reconsidered. This motion was passed. After discussion, it was moved to adopt the following amendment to the By-laws:

Article VI

The American Institute of Chemists' Award to Great Educators

Section 1. An Award consisting of

1. Honorary membership in The American Institute of Chemists
2. A distictive gold lapel button
3. An illuminated scroll

may be presented by The American Institute of Chemists under the conditions hereinafter set forth.

This Award shall be known as The American Institute of Chemists' Award to Great Educators.

The date of the founding of the Award shall be 1949.

The purpose of the award shall be to stimulate greater respect for the profession of teaching chemistry and to advance the training of chemists.

Sec. 2. The Jury shall consist of the active President of The American Institute of Chemists and the three immediately preceding eligible past Presidents of The American Institute of Chemists and the Secretary of The American Institute of Chemists. Each member of the Jury must be a member of The American Institute of Chemists. Each member shall have one vote. The senior past President member of the Jury shall be the chairman and the Secretary of The American Institute of Chemists shall be the Secretary of the Jury.

Sec. 3. The Award shall be made by a majority of the Jury. The vote shall be limited to nominations supplied by a special Nominating Group. This Nominating Group shall consist of the Chapter Representatives and three Members-at-Large chosen from areas in which Chapters are not now operating. The three Members-at-Large shall be appointed each year in September by the President with the approval of the Council. The purpose of this Nominating Group is to obtain broad geographical representation.

Sec. 4. The Award shall be made by a majority of the Jury. It shall be made for noteworthy and outstanding service to the profession of teaching in the fields of chemistry and chemical engineering. Careful consideration shall be given to accomplishments as a teacher and particularly to achievements in the inspiration of students and others to do creative work.

Sec. 5 Members - at - Large of the Nominating Group and the Chapter Representatives may submit one nomination each to the Secretary of the Jury prior to October 15th. The Jury shall complete its consideration of the nominations by November 15th and they shall arrange for the notification of the educator chosen for the Award.

Sec. 6. The Jury of The American Institute of Chemists' Award to Great Educators shall have the power to arrange for the presentation of the Award and to decide any points not specifically covered in this Article.

According to Article VIII, Sec. 2, of the AIC Constitution, the above amendment to the By-laws cannot become effective until it is voted on again at the next meeting of the National Council: "A By-law must be approved by a majority of those present at two successive Council meetings to become effective."

After discussion by Chapter representatives concerning the amount of dues rebates to Chapters, a motion was made to restore the dues rebates to their former rate. The motion was defeated. Upon motion, the President was asked to appoint a Committee to Consider the Amount of Dues Rebates. The following Committee was appointed: Dr. D. L. Cottle, Chair-

man; Dr. M. J. Kelley, Dr. Louis Koenig, and C. W. Rivise.

FELLOWS

The following new members were elected:

Rosinger, Kurt Edward
Assistant Chief, Chemical Branch O.I.T., Dept. of Commerce, Washington 25, D.C.

Ryan, Vanston H.
Chairman, Dept. of Natural Science; Professor of Chemistry, Rockhurst College, Kansas City, Missouri.

Sage, Blodgett
Business Development Specialist, U.S. Dept. of Commerce, Office of International Trade, Washington 25, D.C.

Vorce, Lafayette Denton
Chemical Engineer, Westvaco Chemical Division of Food, Machinery and Chem. Corp., Chrysler Building, New York, N.Y.

MEMBER

Stevens, Elbridge S.
8 Midland Gardens, Apt. 1-G, Bronxville, New York.

There being no further business, adjournment was taken.

Local Chapter News

C. P. Neidig, F.A.I.C.

Baltimore

Chairman, Marc Darrin
Vice-chairman,
Rev. E. S. Hauber, S.J.
Secretary-Treasurer,
J. Bernard Edmonds
Representative to National Council,
Maurice Siegel
Reporter to Chemist,
Richard B. Treash

The Baltimore Chapter met October 26th at the Northway Apartments, Baltimore. Following dinner, the chairman, Marc Darrin opened the meeting with the announcement that Dr. Harry L. Fisher, a new member of this Chapter, had been awarded Honorary Membership by the National Council of the AIC. Following the announcement, Dr. Fisher spoke briefly on "The Human Side of Research." The presentation of the certificate of Honorary Membership will take place at the next meeting of the Chapter, on November 16th.

In accordance with a new policy set by the Executive Council, the meeting was then thrown open for an informal round table discussion. The topic was "Essentials in the Direction of Research." Dr. Albin H. Warth and Marc Darrin conducted the discussion which found all members in lively participation.

Chicago

Chairman, Dr. Herman S. Bloch
Chairman-Elect, Bruce M. Bare
Vice Chairman, W. B. Hendry
Secretary-Treasurer,
Dr. Louis Koenig
Representative to National Council,
Gene Abson

On November fourth, the Chicago Chapter held a highly interesting meeting on "The Outlook for Chemical Employment in 1950", at which the following persons spoke: A. O. Berger, regional director, U. S. Bureau of Labor Statistics; Thomas Coffer, employment counsellor; Prof. W. C. Johnson, chairman, Department of Chemistry, University of Chicago, and J. S. Wilson, personnel manager, Chemical Division, Corn Products Refining Company.

New Jersey

Chairman, Dr. P. M. Giesy
Vice Chairman, Dr. C. A. Amick
Secretary, Harry Burrell
Treasurer, John B. Rust
Representative to National Council,
Dr. R. P. Parker

The first meeting of the 1949-1950 season was a panel discussion on "Does Present Education Properly Train Chemists for Industry?", held at the Newark College of Engineering on October 31st. Dr. C. L. Brown (Standard Oil Development Company), Dr. A. J. Frey (Hoffman-LaRoche, Inc.) and Dr. M. L. Crossley (American Cyanamid Company), each presented an aspect of the question. There followed a lively discussion from the floor which lasted until late in the evening. Dr. Paul Allen acted as moderator. This meeting was preceded by an informal dinner and was attended by nearly fifteen per cent of the New Jersey Chapter membership. Similar controversial discussions are planned for future meetings.

The National AIC Council approved the new constitution which the New Jersey Chapter passed last year, so that the next election of officers will be carried out in accordance with the new constitution.

Arrangements have been made for those members of the New Jersey Chapter residing near Philadelphia to receive notices of the Pennsylvania Chapter meetings.

Two important committees are active, one in attempting to secure improved educational benefits in chemistry departments of our Teachers Colleges; the other in investigating the possibility of establishing a "Chemists' Lounge" in a Newark hotel.

December 12th Meeting

The New Jersey Chapter will meet jointly with the North Jersey Section of the American Chemical Society on Monday, December 12th, at Military Park Hotel, Newark, N.J., to hear Dr. M. C. Shaw of the Rutgers Department of Ceramics speak on "The Chemistry of Asbestos."

New York

Chairman, Dr. Martin Meyer
Vice Chairman,
Dr. Lincoln T. Work
Secretary-Treasurer,
Dr. M. J. Kelley
Representative to National Council,
Karl M. Herstein
Publicity, G. A. Kirton

The New York Chapter met November 16th at The Brass Rail, 521 Fifth Avenue, New York, N.Y., where Dr. Donald B. Keyes, vice president, Heyden Chemical Corporation, and Dr. Foster D. Snell, president, Foster D. Snell, Inc., discussed "Shall the Institute Begin a Campaign to Secure Licensure for Chemists in New York State?" Recent developments on this subject were reported, followed by active participation in the discussion by members who asked questions and offered suggestions.

New York Chapter to Hold Meeting for Young Chemists

"Opportunities for Chemists in Laboratory and Non-laboratory Positions" will be the topic of the New York Chapter's January 5th meeting, which has been planned with the interest of chemistry students and young chemists in mind. The meeting will be held at The Brass Rail, 521 Fifth Avenue (43rd Street) New York, N.Y. Admission will be free to students and young chemists presenting complimentary tickets. These tickets may be obtained from chemistry professors and laboratory directors in schools and laboratories in this area or may be obtained by writing directly to Karl M. Herstein, 128 Water Street, New York, N.Y. Beer and pretzels will be served. Admission for INSTITUTE members is $1.00

The panel discussion will be conducted by the following outstanding speakers, representing a number of important chemical industries: Dr. Charles N. Frey, director, Scientific Relations, Standard Brands, Inc.; Harold Fyffe, manager, New York Office of Oldbury Electro-Chemical Company; Dr. W. E. Kuhn, manager, Technical and Research Division, The Texas Company; Dr. Donald Price, technical director, Oakite Products, Inc.; Dr. Norman Shepard, chemical director, American Cyanamid Company; Dr. William J. Sparks, director, Chemical Division, Esso Laboratories, and Harold Wakefield, development engineer, The Bakelite Corporation.

The New York Chapter has asked members to bring as guests those young chemists in their own organizations who are not members of the INSTITUTE. The talks will be of particular interest to those about to enter the field of chemistry as a profession as well as to those who have recently done so.

Ohio

Chairman, Robert B. Waters
Chairman-Elect:
Dr. George F. Rugar
Secretary-Treasurer,
Harold M. Olson
Representative to National Council,
G. M. Juredine

The Ohio Chapter held a "Get Acquainted Picnic" at Linwood Park in Vermillion, Ohio, September 17th, and a good time was had by all. An ideal September day permitted baseball, swimming, and other forms of recreation which were thoroughly enjoyed by those present. A picnic supper on the beach was the final event of the day.

November 29th Meeting

The Ohio Chapter, AIC, through the Cleveland District, sponsored the inauguration of annual dinners of the chemical profession in Cleveland, along with the cooperating local sections of the American Chemical Society, the American Institute of Chemical Engineers, and the Electrochemical Society. This first annual dinner and reception of the chemical profession in Cleveland was held November 29th. Over 300 chemists and friends heard Dr. Linus C. Pauling, president of the American Chemical Society, who talked informally on the subject of the future of the profession of chemistry

Dr. Pauling proposed that doing something for the chemist was the best way of doing something for chemistry. He followed this thesis with the discussion of the rights and duties of chemists, because of their special knowledge, to participate in discussions on political and social affairs, and concluded with the prediction that chemistry can eventually make a science out of medicine. "One way in which the science of chemistry is going to contribute to human welfare in the future," said Dr. Pauling, "is by assisting in the development of a scientific attack on medical problems."

Toastmaster was George W. Heise, a past national president of the Electrochemical Society. Entertainment was provided by the Sohio Swing Seven, members of Standard Oil of Ohio Employee's Glee Club. Door prizes were distributed, consisting of books written by the speaker of the evening.

Pennsylvania

Chairman, Hillary Robinette, Jr.
Vice Chairman, C. P. Neidig
Secretary-Treasurer, John H. Staub
Representative to National Council,
Charles W. Rivise

The Pennsylvania Chapter held a meeting on October sixth at the Engineers' Club in Philadelphia. The subject of the meeting was an "Air Pollution Symposium." The speakers were Marcus Sittenfield, consulting engineer, who spoke on "Air Pollution by the Chemical Industry", and Harry J. Harp, assistant chief of the

Division of Air Pollution Control, Bureau of Health in Philadelphia. Both the dinner and the formal meeting were enjoyed by all those in attendance.

AIC Breakfast

The members of The American Institute of Chemists who are attending the Fifth Southwest Regional American Chemical Society Meeting in Oklahoma City, Okla., scheduled an AIC breakfast for December tenth. A short panel discussion is being held on "The Worth of the AIC and What We Should Do About It."

For Your Library

Scientific Foundation of Vacuum Technique

By Saul Dushman, General Electric Co., John Wiley & Sons, Inc., 1949. 882 *pp.* $15.00.

This is a comprehensive study of the science of creating, maintaining and measuring high vacua, and as such it deals with the basic physical and chemical principles involved in the production and measurements of low gas pressures.

The interest in vacuum technique may be said to have started with the invention of the incandescent filament lamp, but subsequent developments mainly under the impetus of the application of low pressures in electronic devices have been so extensive and rapid that a thorough and up to date survey of this type will definitely prove useful.

Bearing in mind that vacuum technique is no longer the exclusively scientific concern of the research laboratory, the author has dealt exhaustively with the engineering aspect and practical applications of the subject. The result is a work which should prove invaluable to those engaged in the various branches of engineering as well as to chemists and physicists.

—William H. Van Delden, F.A.I.C.

Surface Chemistry

Edited by the Faraday Society. Interscience Publishers. 1949. 342 *pp.* 132 *ill.* 30 *plates.* 7⅜"x9¾". $6.00.

The symposia held periodically by the Faraday Society jointly with other scientific societies may always be relied upon to provide significant contributions to the scientific literature. The joint meeting of the Societe de Chime Physique and the Faraday Society held at Bordeaux from October 5 to 9, 1947, which is covered in this volume, is no exception.

In addition to the Presidential Address, the volume contains forty original papers covering various phases of surface chemistry. Half of these are in French and half are in English. For the convenience of the reader, each of the French papers is followed by an abstract in English and each English paper by an abstract in French. The separate contributions are classified under the following heads: Theoretical, Physical Chemistry, Films on Solid Surfaces, and Biophysical Chemistry.

A single reviewer would scarcely be competent to assess the merits of contributions covering such diverse subjects as "Superficial Thermodynamic Progress since Willard Gibbs," "The Kinetics of Adsorption at Liquid/Liquid Interfaces," "The Separation of Catalase and Hemoglobin by Frothing," and "Some Simple Experiments to Illustrate the Effect upon Bacterial Growth of Mutual Precipitation in Mixtures of Colloidal Electrolytes." However, a perusal of those papers relating to fields with which the present reviewer is conversant, shows them to be of uniformly high caliber; and accordingly it is reasonable to assume that the rest of the contributions to the Symposium are of equally high quality.

A series of of four papers by Professor A. E. Alexander and his co-workers in the Department of Colloid Science at Cambridge University will have a special significance for the bio-chemist and bacteriologist as well as for the chemist whose work brings him into contact with problems of surface chemistry. The same holds true for two papers on the relationship between biological activity and structure in certain organic compounds by Schulman and Armstrong of the same department.

A paper entitled, "Reactions aux Inter-

faces: Saponification par Emulsion" by Lachampt, Zviak and Rossignol, which discusses the mechanism of saponification and the speed of diffusion of the soda across the soap film formed, should be of particular interest to chemists in the field of fats and oils.

—Dr. Donald Price, F.A.I.C.

Principles and Practice in Organic Chemistry

By Howard J. Lucas and David Pressman. John Wiley & Sons. 577 *pp.* 6"x9". $6.00.

The views of teachers as to the proper content of courses are in a continual state of flux. There is always room for varying opinions on this subject in any field. In chemistry it is especially true and in organic chemistry, possibly it is even more applicable than in other branches of chemistry. It is difficult, therefore, to judge whether a particular text has what is required and contains padding that is not required. Nevertheless, it is possible to raise some questions which are worthy of consideration.

The present volume, for instance, devotes a chapter to Thermodynamic considerations. It ignores electronic structures and reaction mechanisms which are certainly of equal pertinence in determining the course of organic reactions. Nor has the chapter on Thermodynamics sufficient scope to qualify a student to use these principles freely.

The chapters on the unit techniques involved in organic preparations are good. The descriptions of individual preparations, however, fall between the brevity of merely essential steps and the detail of full experimental procedure, so that very well qualified laboratory supervision would be required.

The most conspicuous lack, however, is the absence of bibliographic documentation. This reviewer is firmly of the opinion that nothing is more important than to teach students the habit of going to the literature. Practice in this is as essential as practice in laboratory technique. The omission of library references, therefore, is a very great defect in the book. On the other hand, the large number of preparations given should provide material for selection in more than one course in organic preparations.

—Karl M. Herstein, F.A.I.C.

Antibiotics

G. W. Irving, Jr., and H. T. Herrick, Editors. Chemical Publishing Company. 1949. 5¾"x8¾". *VII Plus* 273 *pp.* $6.75.

This little book contains a series of lectures presented before the Graduate School of the U.S. Department of Agriculture during September, 1946, to January, 1947, by twelve investigators, all prominent in antibiotic research. The contributors are G. O. Cragwall, R. J. Dubos, K. Folkers, J. O. Heishman, H. T. Herrick, G. W. Irving, Jr., C. S. Keefer, K. B. Raper, W. J. Robbins, S. A. Waksman, H. Welch, and O. Wintersteiner. This volume covers important facts concerning penicillin, streptomycin, tyrothricin, gramacidin, and several other antibiotics insofar as they were available three years ago.

—Dr. Henry Tauber, F.A.I.C.

Soaps and Detergents

By E. G. Thomssen and John W. McCutcheon. MacNair Dorland Company. 1949. 501 *pp. and Index.* $9.00.

This volume successor to *Modern Soap Making* by Thomssen and Kemp, fills a long felt need for a work which provides, within a relatively short compass, a sound discussion of the principles and procedures of soap manufacture, combined with data on the various processes for pre-treatment of fats to be used in soap making and particularly with full discussion of synthetic detergents, their types and uses.

The initial chapter is particularly interesting, describing types and sources of the fats and oils used in soap making, the various preliminary processing steps such as refining, bleaching, hydrogenation, hydrolysis; non-fatty soap raw materials and packaging materials. Further chapters on Equipment Selection, Soap Making Methods, Soap Products, Perfumes and Colors, are well prepared and interestingly presented.

The chapter on Synthetic Detergents combines a clear logical discussion of properties of synthetic detergents and wetting agents with general description of raw material sources and formulae. The various types of detergents and wetting agents are described and examples of each cited by trade-name and producer. Development of detergent materials into merchantable products for domestic or in-

dustrial use is described. The appendix includes, together with other data, a detailed listing by tradenames of practically all synthetic detergents and wetting agents produced in the U.S.A. with their compositions, uses, and manufacturers' names.

The volume is physically attractive, printed from clear type on heavy coated paper bound in durable maroon buckram.

—Alan Porter Lee, F.A.I.C.

Chemical Books Abroad

Rudolph Seiden, F.A.I.C.

An accumulation of German-language books awaited me on my return from vacation. Available space makes it necessary to review them briefly, and where the title is self-explanatory, or when a volume does not seem to be of special value to American chemists, it will be merely listed at this time. All of these books can now be ordered through American book dealers.

(A) Wissenschaftliche Verlagsgesellschaft m.b.H., Stuttgart-S: *Grundlagen der Pharmakologie,* by K. W. Merz. 4th ed., 288 pp. with 77 ill., DM 15. In arranging the up-to-date material, the author accepted pharmacological rather than chemical viewpoints. • *Pharmakologie des Deutschen Arzneibuchs,* by Hans Braun. 3rd ed., 380 pp. with 101 ill., DM 15. A critical review of the official German remedies, arranged according to their chemical - pharmaceutical actions. • *Medizinisches Woerterbuch der deutschen und englischen Sprache,* by M. Goertz and D. W. Unseld. 2nd ed., 406 pp. DM 12.50. This vocabulary of medical, pharmaceutical, chemical, and related terms consists of two parts in one volume: German-English and English-German. It should effectually help translators and readers of foreign scientific literature. • *Muenchener Klinisches Rezepttaschenbuch,* by H. Braun and F. Steigerwaldt. 1948, 864 pp. DM 15. A collection of prescriptions for all disease conditions. • *Taschenbuch fuer die Wachsindustrie,* by Georg Buchner and Carl Luedecke. 3rd ed., 620 pp. with 67 tables, DM 12.50. An excellent compilation of facts and figures concerning animal, vegetable, mineral, and synthetic waxes, their solvents, bleaching agents, uses, and determinations. However, the important American literature sources have been omitted by the authors. • *Chemie—ueberall Chemie,* by E. Pilgrim, 3rd ed., 325 pp. with 16 ill., DM 15. Author proves in popular - scientific manner that chemistry is "everywhere" and in everything. • *Max von Pettenkofer,* by Karl Kisskalt, 1948. 135 pp. with 14 ill., DM 6. A well-written biography of the famous chemist and founder of scientific hygiene, Pettenkofer (1818-1901).

(B) Walter de Gruyter & Co., Berlin W 35: *Allgemeine and physikalische Chemie,* by Werner Schulze. Sammlung Goeschen, Nos. 71 (part 1) and 698 (part 2); 3rd ed., 146 and 160 pp. Each volume DM 2.40. A condensed treatise on general and physical chemistry.

(C) Sueddeutsche Apotheker-Zeitung, Stuttgart: *Einfache Nachweise von Pflanzeninhalts-und Heilstoffen,* by Willi Peyer. 2nd ed., 120 pp., DM 2. A little booklet dealing with simple qualitative tests for the determination of the active ingredients of many vegetable drugs.

(D) Verlag Dr. Roland Schmiedel, Stuttgart-S: *Gegenueberstellung des Amerikanischen Arzneibuches und des Deutschen Arzneibuches,* by Ernst Venth. 1947, 62 pp. DM 4.50. This is primarily a composition comparison of the official American drugs contained in the U.S.P. XII with the corresponding German drugs of the D.A.B. 6 and its supplement (i.e., the official German pharmacopeia).

(E) Dietrich'sche Verlagsbuchhandlung, Wiesbaden: The publisher of the FIAT review of German Science 1939-1946, sent another group of books of this interesting series, each volume of which sells at DM 10. *Chemotherapie,* by Fritz Schoenhoefer (No. 43; 304 pp.); • *Anorganische Chemie,* by Wilhelm Klemm, parts II (No. 24, 179 pp.) and III (No. 25, 275 pp.); • *Physikalische Chemie,* by Clusius (No. 30, 270 pp.); • *Allgemeine Metallkunde,* by Max Hansen (No. 31, 295 pp.), deals with theoretical problems of metallurgy; • *Metallkunde der Nichteisenmetalle,* by Max Hansen, parts I (No. 32, 207 pp.) and II (No. 33, 171 pp.), a survey of the progress made with respect to the production, refining, and uses of nonferrous metals; • *Biochemie,* by Richard Kuhn, part I (No. 39, 218 pp.); • *Praeparative organische Chemie,* by Karl Ziegler, part I (No. 36, 432 pp.); • *Pharmakologie und Toxikologie,* by Fritz Eichholtz, parts I (No. 61,

241 pp.) II (No. 62, 258 pp.) and III (No. 63, 339 pp.).

(F) H. R. Sauerlaender & Co., Aarau (Switzerland): *Welt der Atome,* by H. Greinacher, 4th ed., 54 pp., Fr. 2. A popular-scientific introduction into atomic physics and chemistry and the atom bomb. • *Mathematische Formelsammlung,* by Ernst Boller, 1946, 88 pp. Fr. 4.50. Mathematical formulas from simple arithmetic to vector analysis. • *Entomologisches Praktikum,* by O. Schneider-Orelli. 2nd ed., 237 pp. with 117 ill. Fr. 10. A practical book on insects, especially animal and plant pests, their recognition and extermination. • *Qualitativer anorganischer Analysengang,* by Kurt Boehler, 1948, 31 pp. Fr. 3.

(G) Verlagsgesellschaft Beobachter A. G., Basel: *Repertorium Pharmazeutischer Specialpraeparate,* with *Supplement I,* by Herbert Ludwig. 2nd ed., 1308 and 331 pp. (price not stated). While the first volume (1947) describes 10,000 pharmaceutical specialties and sera, its supplement (1948) adds 2000 preparations produced by a total of 2000 American, English, German, Swiss, and other European firms. Alphabetically arranged, each item is described according to producer's name, composition, indications, commercial unit-sizes, dosage, cautions, year of introduction, and literature. Even though there are similar drug encyclopedias available in the U.S.A., this "Repertorium" should prove valuable to American researchers and manufacturers of pharmaceuticals because it deals primarily with European formulas, many of which are known to be of high therapeutic efficacy.

Booklets

Samples of Unitane O-310 and Unitane OR-324 improved types of titanium dioxide the former for baking enamels and lithographic inks, the latter for enamel finishes, are available for testing purposes upon request to the American Cyanamid Company, Calco Chemical Division, Bound Brook, N.J.

"Nitrosyl Chloride Properties and Reactions." Product Development Booklet NC-2 16-pages. Product Development Department, Section F, Solvay Process Division, Allied Chemical and Dye Corporation, 40 Rector Street New York 6, N.Y.

"Phosphorylated Compounds." Information and use in fermentation studies. Schwarz Laboratories, Inc., 202 East 44th Street, New York 17, N.Y.

"Metalab Laboratory Equipment." Catalog. Metalab Equipment Corp., 1529 Dean Street, Brooklyn 13, N.Y.

To Chemists

The Season's Joys and a Gift of the World's Abundance to be unsealed by your skill.

The quintessence of earth He takes, and fees,
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Rich metals and sweet odors now declare
The glorious blessings which His laws prepare

—Sir John Beaumont

Condensates

Ed. F. Degering, F.A.I.C.
Armour Research Foundation

A farmer in the corn belt was experimenting on improvement of corn. Each year he produced better corn, and won the first prize at the County Fair. But each year he distributed his improved seed to his near neighbors. A friend asked, "Why do you give away the good seed? Don't you know these other farmers will compete with you? Do you want them to win the honors you have been taking?"

The good farmer made this reply: "My neighbors plant corn alongside my fields. The winds blow the pollen from their corn onto mine. If they have poor stuff in their fields, my own quality is hurt. The better corn my neighbors raise, the better corn I can produce. That is why I give them the good seed. I have never yet hurt myself by helping a neighbor."

It is reported that 44 of the 96 known chemical elements are now used in the manufacture of automobiles.

Nylon monofilament, according to *Du Pont Magazine*, is now being used for harp strings.

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National Council Meeting

The next meeting of the National Council, A.I.C., will be held January 11, 1950, at The Chemists Club, New York, N.Y.

AIC Annual Meeting

The Annual Meeting, AIC, will be held May 11th and 12th at the Hotel New Yorker, New York, N.Y. Dr. Walter J. Murphy, F.A.I.C., will be presented with the 1950 Gold Medal of the Institute. Dr. Maurice J. Kelley, F.A.I.C., of Nopco Chemical Company, Harrison, N. J. is chairman of the Committee on Arrangements.

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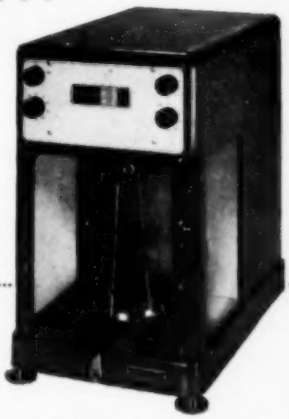

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